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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,805	09/11/2003	Zakar Raffi Hachikian	ITW 0006 1A/41038.9/14350	5226
51635	7590	09/09/2005	EXAMINER	
DINSMORE & SHOHL LLP ONE DAYTON CENTRE, ONE SOUTH MAIN STREET SUITE 1300 DAYTON, OH 45402-2023			FEELY, MICHAEL J	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/659,805

Applicant(s)

HACHIKIAN, ZAKAR RAFFI

Examiner

Michael J. Feely

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5,7,9,10,12,14,17,20,22,24-29,31,34,35,37,44 and 45 is/are rejected.  
7) ☒ Claim(s) 6,8,11,13,15,16,18,19,21,23,30,32,33,36,38-43 and 46 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1203.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102/103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 9, 20, 22, 24-26, and 34 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over (US Pat. No. 3,892,684).

Regarding claims 1, 2, 9, 20, and 22, Logan discloses: *(1)* a two-part epoxy adhesive (Abstract; column 5, lines 41-46) comprising: (a) a resin component comprising a mixture of epoxy resin and an internally flexibilized epoxy resin (column 3, lines 16-29; column 5, lines 18-23), and (b) a hardener component comprising a mixture of a flexibilizer (column 2, line 10 through column 3, line 15) and an unmodified or modified aliphatic amine, an unmodified or modified polyamine, or combinations thereof (column 3, lines 30-63); *(2)* wherein the epoxy adhesive has an initial curing time of less than 3 hours (column 4, lines 20-34); and *(9)* wherein said resin component is free of nonylphenol and said hardener is free of nonylphenol (column 2, line 10 through column 3, line 63).

Art Unit: 1712

Regarding claims 24-26 and 34, Logan discloses: **(24)** a process of adhering at least two substrates to each other comprising intercalating between the surfaces and adhesive (Abstract; column 5, lines 41-46) comprising a reactive mixture of: (a) a resin component comprising a mixture of epoxy resin and an internally flexibilized epoxy resin (column 3, lines 16-29; column 5, lines 18-23), and (b) a hardener component comprising a mixture of a flexibilizer (column 2, line 10 through column 3, line 15) and an unmodified or modified aliphatic amine, an unmodified or modified polyamine, or combinations thereof (column 3, lines 30-63); **(25)** wherein the epoxy adhesive has an initial curing time of less than 3 hours (column 4, lines 20-34); **(26)** wherein the act of intercalating includes dispensing said resin component and hardener component in equal parts by volume and mixing until the mixture is relatively homogeneous (column 4, lines 20-43) and is applied relatively evenly to the substrates (column 5, lines 41-46); and **(34)** wherein said resin component is free of nonylphenol and said hardener is free of nonylphenol (column 2, line 10 through column 3, line 63).

In all of the above claims, Logan does not explicitly disclose: **(1 & 24)** wherein after said resin component and said hardener component are mixed and reacted, the cured epoxy resin adhesive has a tensile elongation at room temperature or greater than 30%; **(20)** wherein the reactive mixture of said resin component and said hardener component has an initial curing time of about 1.5-2 hours and after curing the epoxy adhesive has a tensile elongation at room temperature of greater than 120%; and **(22)** wherein the reactive mixture of said resin component and said hardener component has an initial curing time of about 1.5-2 hours and after curing the epoxy adhesive has a tensile elongation at room temperature of greater than 80%. However, it has been found that, "Products of identical chemical composition can not have mutually

Art Unit: 1712

exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, the property limitations of claims 1, 20, and 24 would appear to be inherent of the composition of Logan because he satisfies all of the material limitations of the claimed composition, and it has been found that a chemical composition and its properties are inseparable.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 7, 10, 12, 14, 17, 27-29, 31, 35, 37, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan (US Pat. No. 3,892,684) in view of Marten et al. (US Pat. No. 5,459,208).

Regarding claims 3, 10, 27, and 35, Logan discloses the use of additives, including plasticizers (free of nonylphenol) and fillers (*see column 5, lines 15-40*); however, they do not explicitly disclose the use of coupling agents and thixotropic agents.

Regarding claims 4, 12, 28, and 37, Logan discloses the use of additives, including plasticizers (free of nonylphenol) (*see column 5, lines 15-40*); however, they do not explicitly disclose the use of accelerators and thixotropic agents.

Art Unit: 1712

Marten et al. disclose a similar composition featuring a flexibilized epoxy resin (Abstract), an amine-type hardener (Abstract; column 7, line 50 through column 8, line 8), and *customary additives* (Abstract), including plasticizers, fillers, *accelerators*, *thixotropic agents*, and *coupling agents* (column 8, line 57 through column 10, line 15). The teachings of Marten et al. demonstrate that accelerators, thixotropic agents, and coupling agents, along with plasticizers and fillers are recognized in the art as customary additives for flexible epoxy resin compositions. In light of this, it has been found that the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination – see *MPEP 2144.07*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include *accelerators*, *thixotropic agents*, or *coupling agents*, together with plasticizers and fillers, as taught by Marten et al., in the composition of Logan because the teachings of Marten et al. demonstrate that accelerators, thixotropic agents, and coupling agents, along with plasticizers and fillers are recognized in the art as customary additives for flexibilized epoxy resin compositions.

Regarding claims 44 and 45, the combined teachings of Logan and Marten et al. are as set forth above and incorporated here to satisfy the limitations of claims 44 and 45.

Regarding claims 5, 7, 14, 17, 29, and 31, the combined teachings of Logan and Marten et al. do not provide the specific concentration ranges set forth in claims 5, 7, 14, 17, 29, and 31. It should be noted that Applicant fails to show criticality for these ranges. In addition, one skilled in the art would have recognized that all of these ranges are result-effective variables to ensure a desired level of flexibility, structure integrity, crosslinking, adhesiveness, and auxiliary properties contributed by the fillers.

Art Unit: 1712

In light of this, it has been found that “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and, “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the composition of Logan and Marten et al. with the concentrations of the instant claims because it has been found that it is not inventive to discover the optimum or workable ranges of a result effective variables by routine experimentation.

***Allowable Subject Matter***

6. Claims 6, 8, 11, 13, 15, 16, 18, 19, 21, 23, 30, 32, 33, 36, 38-43, and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

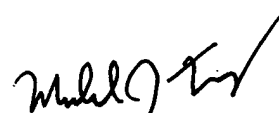
Art Unit: 1712

*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely  
Primary Examiner  
Art Unit 1712

September 6, 2005